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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,044	12/18/2001	Tsutomu Kai	1117.66068	6058

7590 03/24/2004

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EXAMINER
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LEWIS, DAVID LEE

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/025,044

Applicant(s)

KAI ET AL.

Examiner

David L Lewis

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1,2 and 16-27 is/are rejected.
- 7) ☐ Claim(s) 3-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Allowable Subject Matter*

1. **Claims 3-15** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.  
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 16-22, 25, and 26 are rejected under 35 U.S.C. 102(a) as being anticipated by Sasaki et al. (6,100,865).**
3. **As in claim 16, Sasaki teaches of a liquid crystal display device, comprising: first switching elements connected to liquid crystal capacitors via pixel electrodes respectively, figure 5 item T11; data lines for supplying data to said first**

switching elements, **figure 5 item D1**; scanning lines for controlling said first switching elements, **figure 5 item G1**; and second switching elements, **figure 5 item Ty1**, each having a control terminal connected to said data line or said scanning line, **figure 5 item G1**, and an input/output terminal with one end connected to a common inspection input/output terminal, **figure 5 item Ry**, and another end connected to a capacitor, **figure 5 item Cy1**.

4. **As in claim 17**, Sasaki teaches of wherein further comprising: a data supply circuit including a data line driver or a switching element for supplying data to said data line, figure 5 item 102; and a scanning signal supply circuit for supplying scanning signals to said scanning line, figure 5 item 101. **As in claim 18**, Sasaki teaches of, wherein said capacitor increases a storable capacity thereof by connecting one end thereof to said second switching element and another end in common, figure 5 item Cy1. **As in claim 19**, Sasaki teaches of, wherein said other end of said second switching element is connected to said liquid crystal capacitor via said pixel electrode, figure 12 item sen5 and sen5. **As in claim 20**, Sasaki teaches of, wherein said second switching elements include switching elements with control terminals connected to said data lines, figure 3 item Tt1 and D1, and switching elements with control terminals connected to said scanning lines, figure 5 item Ty1. **As in claim 21**, Sasaki teaches of, wherein said one end of said second switching element is connected to a common inspection input/output terminal, figure 3 item Tt1, and said data

line, figure 3 item D1. **As in claim 22**, Sasaki teaches of, further comprising: a third switching element for resetting or presetting said capacitor connected to said second switching element, figure 3 item Tv1. **As in claim 25**, Sasaki teaches of, wherein said switching elements connected to said data lines and said switching elements connected to said scanning lines are connected to a common inspection input/output terminal, figure 5 item Sen5 or Vcc. **As in claim 26**, Sasaki teaches of, wherein said switching elements connected to said data lines and said switching elements connected to said scanning lines are connected to different inspection input/output terminals, figure 3 and 12 items Tt1 and Ty1.

5. **Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Aoki et al. (2002/0047828 A1).**
6. **As in claim 1**, Aoki teaches of a liquid crystal display device, comprising: a display circuit including data lines and scanning lines arranged in a two-dimensional matrix, **figure 7 items 4 and 3**, and switching elements connected between said data lines and said scanning lines, **figure 7 item 5**; a first inspection circuit including an inspection voltage input and/or output terminal for inputting and/or outputting an inspection voltage to/from one end of said data line via a first analog switch, **figure 7 items 50, paragraph 83**; and a second inspection circuit including an inspection voltage input and/or output terminal for

inputting and/or outputting an inspection voltage to/from another end of said data line, **figure 7 item 90, paragraph 87**, wherein said display circuit, said first inspection circuit, and said second inspection circuit are provided on one substrate, and said first inspection circuit is separable from said display circuit, **page 11 paragraph 108**, wherein the inspection circuit is alternatively found inside and outside of the display area, separable by being distinctly inside and outside said display area SR of figure 7 and alternatively described in paragraph 108. **As in claim 2**, Sasaki teaches of wherein said first and second inspection circuits are separable from said display circuit, page 11 paragraph 108, wherein as above separable is interpreted as being distinct or similar in reference to the display area.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 23, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki (6100865) in view of Aoki et al. (2002/0047838).**

8. **As in claims 23 and 24**, Sasaki is silent as to said second switching elements being provided inside/outside a sealing part for sealing liquid crystal in said liquid crystal display device. However Sasaki teaches that the inspection circuit can be fabricated in a common process on the same substrate as the pixel TFTs of the matrix display section, column 9 lines 60-65. Aoki et al. teaches similarly how an inspection circuit can be placed either inside or outside of the display screen area, page 11 paragraph 108. Wherein said sealing part would be equivalent to the isolated area of the display screen as taught by both Sasaki and Aoki, which is distinct, and therefore sealed by the portion of the substrate the switching elements are fabricated on. Therefore it would have been obvious to the skilled artisan at the time of the invention to provide alternatively inside or outside said second switching elements as a design choice because its known use in the alternative is suggested by Aoki and implied by Sasaki. **As in claim 27**, Aoki teaches of the light shield Sasaki is silent on, page 3 paragraph 35, wherein said light shield is a known feature available to the skilled artisan for the purpose of enhancing display characteristics as known in the art.

#### Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 6064222, 6639634, 6157358, 6166713, 6424328, 6525556, 6337677, 6023260, 2003/0184334.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L Lewis whose telephone number is 703 306-3026. The examiner can normally be reached on M, T, TH, F. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703 305-4938. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

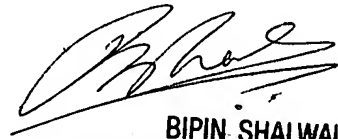
(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

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March 18, 2004



BIPIN SHALWALA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600